ITT Family of Business and Personal Computers

# INSTALLATION GUIDE FOR THE ITT ENHANCED GRAPHICS MONITOR

ITT INFORMATION SYSTEMS
A Division of ITT SYSTEMS, INC.

The instructions in this guide provide you with the information you need to install the ITT Enhanced Graphics Monitor on any of your ITT business and personal computers. The ITT Enhanced Graphics Monitor requires that a compatible color display board, such as the ITT Enhanced Graphics Adapter (EGA), the ITT Integrated Graphics Adapter (IGA), or the ITT Color Graphics Adapter (CGA) be installed in your computer. The numbers in the illustrations at the back of this guide relate directly to some of the numbered steps in the written instructions.

## TOOLS

The only tool you need is a medium size flat-blade screwdriver.

## BEFORE YOU BEGIN

Before you install the monitor, perform a careful visual check, and if any damage is evident or if the monitor stand is missing, please contact the dealer where you purchased your monitor.

Record the model and serial number from the back of your monitor in the space below.

Model: _____ Serial Number: _____

## IMPORTANT SAFETY INSTRUCTIONS:

Dangerous electrical shock hazards are present inside the monitor at all times. Do not remove any covers from this equipment. There are no user-serviceable parts found inside. For technical assistance, contact your dealer or a qualified ITT approved service center.

To avoid equipment hazards, always observe the following:

- Always place the equipment on a stable, level surface, capable of supporting the equipment's weight.
- Verify that the intended power source meets the monitor's requirements, which are identified on its type plate.
- Connect the equipment to a properly grounded AC power outlet suitable for the connector on the power cord provided with the equipment.
- Protect the equipment from direct heat, moisture, excessive sunlight, and dust.
- Do not block or restrict the flow of cooling air through the equipment by covering up its ventilation slots.
- Allow ample space for air to circulate freely around the equipment. If the equipment is installed in a restricted air space, additional ventilation must be provided.
- Make sure the equipment can be safely used and conveniently viewed when in its operating location.

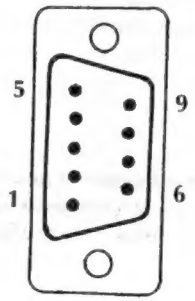
## VIDEO CONTROLLER/SYSTEM CONFIGURATION

Verify that your computer has been configured for color video output operation. If your computer is equipped with an internal MONO/COLOR switch or jumper, this feature must be in the COLOR position for proper operation. Refer to your computer's user's guide or maintenance manual for the location of this feature and how to gain access to it.

For identification of the your EGA, IGA, or CGA board's configuration and the connectors on your computer, refer to your computer's user's guide or to the installation instructions provided with your respective graphics adapter.

For clarity of reference, "medium resolution" and "enhanced color" are synonymous with 350-line video modes of operation, while "low resolution" and "standard color" are synonymous with 200-line video modes.

The pin assignments for the male nine-pin DB-9P connector on the monitor's signal cable are as follows (video signals must be active positive-going TTL level):




| Pin | Output |
|---|---|
| 1 | signal ground |
| 2 | secondary red (R') |
| 3 | red (R) |
| 4 | green (G) |
| 5 | blue (B) |
| 6 | secondary green (G') |
| 7 | secondary blue (B') |
| 8 | horizontal sync |
| 9 | vertical sync |
| shell | chassis ground |

## INSTALLATION

1. Turn off the power to your computer system and to all connected external optional equipment.
2. Place the monitor stand with the arrow on its top facing towards you. Note that the stand allows the monitor to turn 40 degrees to the left or to the right. Before placing the monitor on its stand, check that the stand will turn an equal amount in either direction.
3. The monitor is heavy and should be carefully lifted and placed on the stand so that the arrow on the stand points to the front of the monitor. Verify that the monitor can be tilted on its stand by about 20 degrees up or down. Once correctly placed on the stand, the monitor can be tilted and turned to suit the viewing conditions.

***CAUTION:*** ***Once the monitor is placed on the stand, do not pick the monitor up by the stand, as it can very easily slip off and be damaged beyond repair. If the monitor must be moved, first remove the monitor from the stand and set it aside. Then move the stand to the new location and replace the monitor.***

4. Press and release the ON/OFF pushbutton at the bottom right corner of the monitor so that it locks in its out (OFF) position.
5. Insert the 9-pin connector at the end of the monitor's signal cable in the appropriate 9-pin connector on the graphics card in your computer. Secure the connector in place by tightening both of its screws. Connection examples to the ITT Enhanced Graphics Adapter, the ITT Integrated Graphics Adapter or the ITT Color Graphics Adapter are shown by detail illustrations A, B and C.

***NOTE:*** *If both an EGA and another color capable controller board are installed in the same computer system, care must be taken that only one board is set for color.*

6. Plug the monitor AC power cable into a properly grounded electrical outlet. The outlet must be suitable for the power cable connector and provide the electrical operating power that the type plate of the monitor calls for.
7. Turn the contrast control knob (just above the power pushbutton) fully counter clockwise until it clicks. This is the 'preset' position.

***NOTE:*** *The contrast control has visible effect only if the system is operating under "enhanced color" configuration.*

8. Turn the brightness control knob (just above the contrast control knob) so that it is in the middle of its travel.
9. Turn your computer ON.
10. Turn the monitor ON by pressing the ON/OFF pushbutton so that it locks in its in (ON) position. The power-on indicator light should come on.
11. Wait for the monitor to warm up and the display to stabilize, then adjust the brightness control knob and the contrast control for the desired display preference.
12. Turn or tilt the monitor to obtain the most convenient viewing position.

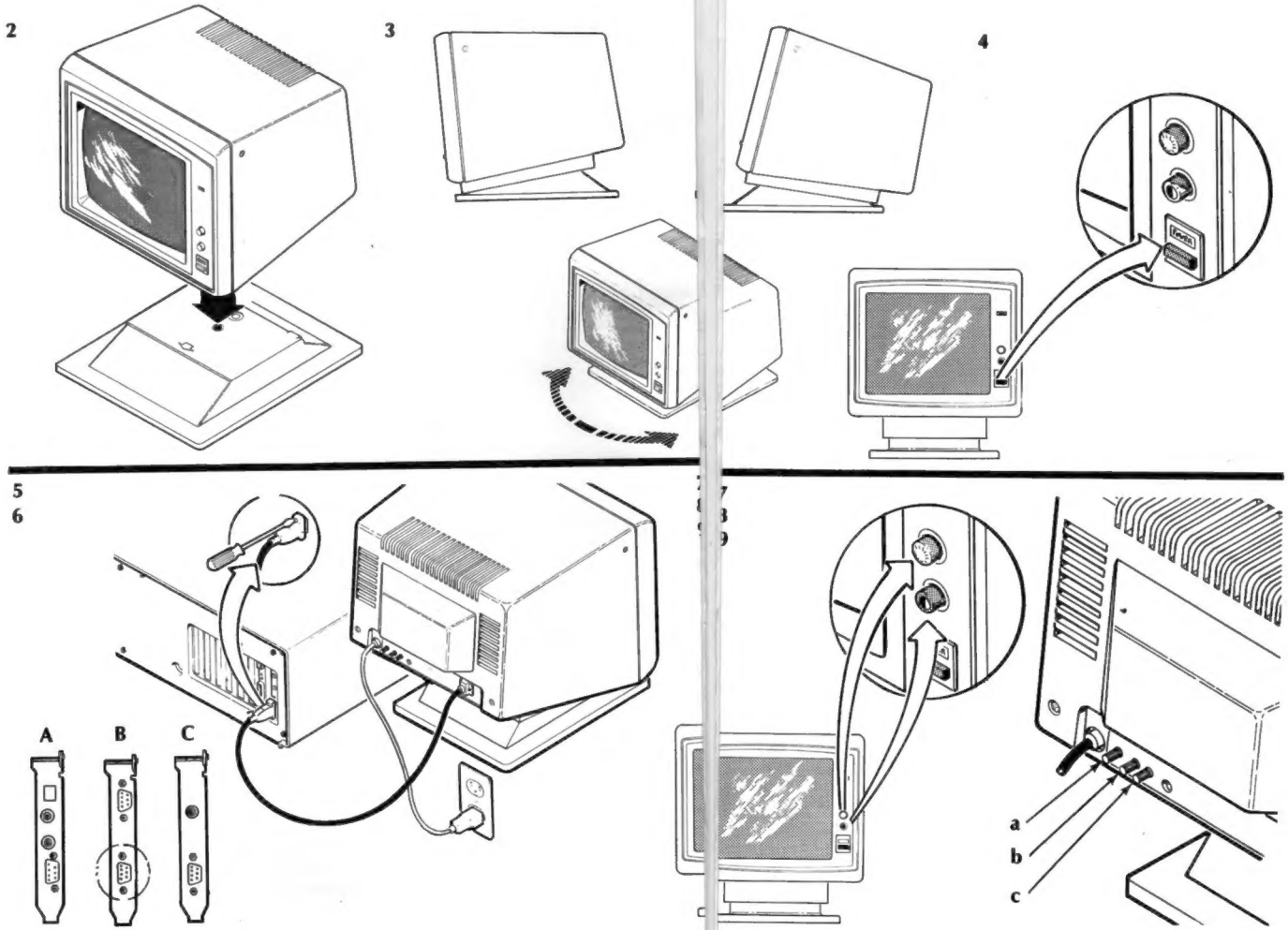
There are three other controls located on the back of your monitor. These controls are set at the factory and should not require adjustment under normal conditions. The controls and their functions are:

**a** V-Size 1: the vertical size 1 control allows you to adjust the vertical size of the monitor display when the monitor is operating in the low-resolution mode. This control does not function when the monitor is in the medium-resolution (350 lines) mode.

**b** V-Size 2: the vertical size 2 control allows you to adjust the vertical size of the monitor display when the monitor is operating in the medium-resolution mode. This control does not function when the monitor is in the low-resolution (200 lines) mode.

**c** V-Hold: the vertical hold control allows you to adjust the stability of the monitor displays' vertical hold if the display should begin to roll.

If you cannot obtain a display on the monitor screen, turn the monitor off. Recheck your cable connections, using the instructions presented above. Also, verify that electrical power is present at your AC wall outlet and that your computer is turned on and receiving electrical power. If the trouble persists, contact your dealer or a qualified ITT authorized service center.


2
3
4
5
6
A
B
C
a
b
c

## FCC REGULATORY STATEMENT

**WARNING:** This equipment has been certified to comply with the limits for a Class B computing device, pursuant to subpart J of Part 15 of FCC rules. Only peripherals (computer input/output devices, terminals, printers, etc.) certified to comply with the Class B limits may be attached to this computer. Operation with noncertified peripherals is likely to result in interference in radio and TV reception. If peripherals not offered by ITT Information Systems Division are used with the equipment, it is required that shielded and grounded cables be used (with in-line filters, if needed).

This equipment generates and uses radio frequency energy, and, if not installed and used in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in subpart J of Part 15 of FCC rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception that can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient the receiving antenna
Relocate the computer with respect to the receiver
Plug the computer into a different outlet so that computer and receiver are on different branch circuits

If necessary, the user should consult the dealer for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful: "How to identify and resolve radio-TV interference problems." This booklet is available from the U.S. Government Printing Office, Washington, DC 20402, stock no. 004-000-00345-4.

This system was certified for compliance to the FCC rules using shielded interface cables. If cables other than the shielded cables provided with this product are used, interference may occur.

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